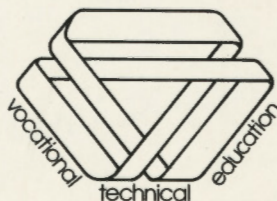


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climate for articulation

REPORT OF A CONFERENCE OF VOCATIONAL DIRECTORS AND TECHNICAL COLLEGE PRESIDENTS AND DIRECTORS IN SOUTH CAROLINA

OCTOBER 12-14, 1978

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credits

Mr. William Power of the Office of Vocational Education, State Department of Education, provided the photographs used in this publication. He was instrumental in the public information activities related to this conference and took the photographs used here. Mr. William Power and Ms. Ann Klosky, both of the State Department of Education, provided valuable assistance in the preparation of this report. Their help is gratefully acknowledged by the State Advisory Council and by the editor.

summary

During the past decade and a half the political and educational leaders in South Carolina have developed an outstanding system of sixteen (16) technical education colleges or centers and concurrently the state has built and developed an excellent structure of fifty-six (56) vocational education centers. This rapid growth has not been without growing pains, and essentially each system has been permitted to develop independently. An era of stability has been reached and we now have reached a Climate for Articulation between Vocational and Technical Education in South Carolina.

Used in an educational context, articulation is the act of meshing or interrelating two or more levels of education. When accomplished, students can move smoothly from one level of education to another, often obtaining advanced placement and avoiding lost time or inefficient use of tax dollars. With increasing technological advances, higher cost of education programs, and in recognition of the impatience of society, the articulation of related occupational programs is highly desirable. True articulation between educational institutions has never been easy, and typically schools and colleges have given low priority to articulation. The result of this past attitude has been frustration for transferring students and inefficient repetition of costly instruction.

This is a report of a constructive October, 1978 Conference in South Carolina that was enthusiastically supported by the S. C. Vocational Directors Association and by each of the sixteen (16) technical education institutions. Support, leadership and encouragement was provided by the Office of Vocational Education, State Department of Education; by the Executive Director and Staff of the State Board for Technical and Comprehensive Education; and by the South Carolina Advisory Council on Vocational and Technical Education.

The articulation conference was built on a solid base. Six persons representing the major agencies or groups planned and helped to

conduct the meetings. Two notable, authoritative speakers from out of state were willing to participate at their own expense, in the persons of: Dr. Dan Dunham, designee Associate U. S. Commissioner of Education for Adult and Occupational Education; and Dr. Gene Bottoms, Executive Director of the American Vocational Association.



Encouraged by the presence of most of the vocational directors in the state and all of the technical college presidents/directors in South

Carolina, the conference proceeded from the general to the specific. By the end of the meetings each of the smaller discussion groups were developing specific plans for measurable progress in articulation in their respective geographic areas of South Carolina.

In addition to planning specific action and goals toward greater articulation, the participants emphatically stated this was a beginning; that there should and would be more progress on articulation and greater cooperation; that there should be another meeting a year later.

An enthusiastic, cooperative attitude permeated the conference. There appeared to be a willingness to cooperate for the benefit of the students. There was also recognition that this would improve instruction in both the secondary level vocational programs as well as the post-secondary programs offered by the technical education institutions.

The members of the planning group and each of the participants deserve special credit for their cooperative attitude and support of this concept of vertical program articulation.

why have a conference?

To understand the necessity for a conference of this type several points must be considered. The historical development of the two systems of occupational education has a bearing on the need for a meeting like this one. The definition of articulation and the advantages is also important to this understanding. This section will touch briefly on both of these items.

Historical Development

The technical education system and the development of over fifty (50) new, modern area vocational education centers in South Carolina are the result of an educational need in South Carolina. Less than twenty years ago there was no effective vehicle for providing adequate vocational or technical education for the many citizens who needed this opportunity in an era of burgeoning technology. There were not enough administrators in high schools throughout the state to adequately serve these needs. Most of the post-high school population had no access other than by four-year college programs. Vocational education under the auspices of the Vocational Education Act of 1963 was struggling to make necessary changes and trying to cope with less than adequate facilities and equipment.

In 1962, the General Assembly recognized this need for occupational training and created the State Committee for Technical Education (TEC), the forerunner of the State Board for Technical and Comprehensive Education. It was the early TEC Committee that established the pattern of most of the sixteen (16) Technical Colleges and Centers in the State. From 1962 until late in the 1970's, TEC worked long and hard to establish, develop and improve on the technical education institutions. The progress in TEC ran parallel to but independently of the progress in the secondary level Vocational Education system.

Shortly after the enactment of the Vocational Education Amendments of 1963, the educational leadership in the State Department of

Education conceived and became committed to a policy of developing new area vocational education centers. To provide up-to-date occupational training to secondary level students, with choices beyond the traditional few such as home economics, agriculture, distributive education, and office occupations (office occupations were to gradually become considered as vocational education), it was necessary to expand the program offerings. This meant new shops and laboratories. These were built in new structures that were named Area Vocational Centers (AVC). The administrators of the AVC's, like the TEC administrators, had other, higher priority problems during the formative years. Cooperation between the two types of institutions, AVC and TEC, was casual at best.

By the end of the first ten years, communication, cooperation, and articulation to even a lesser degree was still random and casual.

When first created, the State Advisory Council was charged with an advisory role to educational programs of both vocational education and technical education. More specifically, the State Advisory Council was to be advisory to the State Board of Education (Vocational Education) and the State Committee for Technical Education (later the State Board for Technical and Comprehensive Education).

Eyeing the considerable construction taking place in the TEC system and an almost parallel construction program for vocational centers, the members of the State Advisory Council early began asking pointed questions about cooperation. Both vocational education and technical education offered programs in similar or identical occupational areas. The two types of institutions were frequently located only a few miles apart. Technology was continuing to make occupations more complex. Why couldn't students enter and complete a vocational program at the secondary level, then move on into TEC for more advanced training in the same area without having to start all over again?

The answers were many. Foremost were these: while sounding alike by titles, programs were not always compatible between TEC and VOC. Emphasis and content of programs varied from instructor to instructor and school to school. TEC had a compound problem of having to accommodate entering students who came in with little or no knowledge of the subject (occupation) being taught as well as accept students from several similar but autonomous area vocational centers. Also, in an earlier era of competition for instructors and administrators there had been some animosity — a protectiveness or 'turfmanship' attitude, and a resultant breakdown of communications between the two educational sectors.

1975 Seminar — An Antecedent

Despite the lack of progress toward the meshing of programs and the granting of advanced credit for vocational education graduates entering technical education institutions, several obvious factors remained. The administrators at both levels, secondary and post-secondary, were extremely capable men and women. These administrators were also highly student oriented and wanted to help the students in any way possible. They were also very conscious of extracting the greatest possible use out of the funds available to operate their programs. Lastly, the lack of communication and absence of articulation to that point (1975) was no longer deliberate but the result of previous events and reflected other, more immediate priorities.

In the early summer of 1975, plans began for a tri-sponsored seminar on articulation of vocational and technical education. The State Advisory Council supported the concept and all that was needed to obtain the support of the other two agencies was to explain the idea and request their endorsement and assistance. The conference, which was held on July 16-18, 1975 at Pawleys Island, was tri-sponsored by the Office of Vocational Education, State Department

of Education; the State Advisory Council on Vocational and Technical Education; and the State Board for Technical and Comprehensive Education.

Citing from a report of that 1975 Conference (p. 17.):

The purposes of the meeting were to assess the status of articulation of related vocational and technical education programs; derive suggestions and examples of successful practices in achieving articulation; focus attention on the need for articulation; and promote increased communication between vocational directors and technical education directors/presidents. The immediate evaluation indicated the seminar was successful in all four objective areas.

Twenty invited participants, representing one-half (8) of the technical education institutions and a dozen vocational centers met for the three days to discuss, in a positive manner, program articulation. It was necessary to spend some time developing an understanding and a definition of articulation. The participants then spent considerable time discussing the benefits to the students, to the taxpayers and to the schools, and exploring ways to effect articulation.

To their credit, these persons and the administrators in the offices of vocational education and technical education did follow-up on the meeting. The state office of vocational education and state tec staff co-sponsored and participated in several regional meetings each year to stimulate articulation. Various vocational education directors or technical education presidents/directors assumed the initiative and began to work on this topic. The activities and efforts, however, were unreported, often unknown to other directors within the state, and were requiring an inordinate time involvement of state level personnel to maintain the efforts and progress.

A Definition of Articulation

Articulation has many different meanings, and in this report is used in a rather narrow sense. Referring not to speech or mechanical movement, the term is currently being used in vocational and technical education in South Carolina in an educational context. The elusiveness of the meaning of this term was illustrated by a Spring, 1978 National Conference on Articulation where the term was used to include other related terms such as coordination and cooperation. Again citing from the 1975 Conference Report (p. 5.):

Articulation then is the act of joining or interrelating two or more levels of education; the programs in various types of institutions become interlocked, forming a continuous line and thereby creating articulation. This process permits students to move easily from one program level or type of school to another. It also provides a system whereby teachers can cooperate effectively in providing instruction to meet the needs of individuals.

How the Conference Came About

During the 1977-78 school year there was considerable activity and even more interest in program articulation within the State. Several institutions and the offices of both technical education and vocational education were represented at a regional meeting in Atlanta on this topic. Several meetings within the state were sponsored by the state offices of vocational education and technical education. An even greater number of meetings and projects with instructors from both vocational education and technical education were held at various locations in the state; the actual number of meetings was not reported and so remains unknown. The supporting attitude for cooperation and for articulation was best illustrated by the fact that at a Spring, 1978 National meeting on Articulation in Washington, D. C., there

was probably as much voluntary representation from South Carolina as from any other state. Included in the South Carolina representation were presidents or administrators from nearly all of the sixteen technical education institutions, the Director and a staff member from the Office of Vocational Education, key staff members from Technical Education, and the Executive Director of the State Advisory Council.



Following the Washington Conference, Dr. Don Garrison, President of Tri-County Technical College wrote the State Advisory Council

urging that a state conference be convened on this topic. This was prior to his appointment as a member of the Council. Dr. Garrison urged that the State Advisory Council follow-up on the 1975 Conference and succeeding activities, and involve all of the Technical Education institutions and all of the Vocational Center Directors. The Council supported the concept and urged the Executive Director to work on this matter.

Objectives



A meeting without a purpose (or purposes) is usually totally ineffective. Similarly, a purpose without some vehicle to reach the

purpose becomes just rhetoric. There were identifiable reasons for proposing the conference that is reported in this publication. Most of the objectives were stated, in written form, prior to the meeting of the planning group (discussed in the next section). At the meeting

on August 15, 1978 the planning group reviewed, modified and approved the seven objectives which are stated here:

1. To develop increased respect, friendship and appreciation for counterpart administrators.
2. Identify and prioritize present or imminent problems in vocational/technical education in specific areas.
3. Clarify the need for and understanding of the need to coordinate similar programs between the secondary/post-secondary levels.
4. Identify and discuss successful procedures from various areas of the State.
5. Identify programs amendable to greater efficacy in each of the sixteen areas of the state.
6. Develop measurable goals and specific procedures to be followed in each of the sixteen areas during the 1978-79 school year.
7. Develop measures and techniques to assess progress toward the identified goals at the completion of the 1978-79 year.

the planning group

The concept of a state-wide meeting was discussed informally various times during June and July of 1978 with representatives of several groups or agencies. All of these persons were supportive of the idea, and various constructive comments were offered during conversations.

On August 15, by invitation from the office of the State Advisory Council, a planning meeting was held at Clinton, S. C. to plan the conference. The following persons participated.

Dr. James Morris, Associate Executive Director, State Board for Technical and Comprehensive Education

Mr. L. L. Lewis, Director, Office of Vocational Education, State Department of Education

Mr. P. H. (Bud) Teaster, Director, Daniel Morgan Vocational Center, President, S. C. Vocational Directors Association

Dr. Don Garrison, President, Tri-County Technical College (representing TEC Presidents/Directors)

Dr. Al Newton, Head, Department of Industrial Education, Clemson University

Dr. Robert H. White, Executive Director, S. C. Advisory Council on Vocational and Technical Education

All of the persons at the planning meeting agreed to endorse and support the proposed

meeting. Agreement was reached concerning the dates and location, the overall sequence of activities, and the division of responsibilities to ascertain that the meeting would be as successful as possible.

Mr. Teaster for the Vocational Directors Association agreed to extend an already scheduled meeting of the Vocational Directors by starting the meeting one day earlier than planned.

Dr. Morris of the State TEC Staff, assured participation of the TEC Presidents/Directors by stating that TEC would be willing to convene a Presidents/Directors meeting at Clemson just prior to the start of this conference.

All of the planning members agreed to make various concessions or commitments which would contribute to a successful conference.

Other persons were involved in the preliminary work or planning prior to the conference. The following persons deserve credit for additional work which they willingly performed.

Dr. Cecil Walters, TEC Staff

Mr. Bill Pinson, Vocational Education Staff

Dr. Moody Oswald, Vocational Education Staff

Mr. Al Berry, Director, Lexington AVC

Mr. Greg Black, State Advisory Council Staff

Mr. Bill Power, Vocational Education Staff

Mrs. Linda Chastain, TEC Staff

the program-presentations

The design of the program for this conference was strongly influenced by two factors. The objectives stated earlier were the most dominant influence, in that there were several purposes to be accomplished and minimal time to do this. Another influence was that this was the first time that the vocational directors and technical education presidents/directors would be meeting jointly. The directors and presidents who would be attending would not all know each other at the first meeting of this conference.

The conference began with an evening program preceded by a social period. Earlier in the day, each of the two groups (vocational directors and technical presidents/directors) held separate meetings to take care of business matters unique to each of their groups. The joint evening dinner meeting permitted the opportunity for each person to be introduced, and the group was addressed by Dr. Dan Dunham who holds a position of national prominence in vocational education. The evening meeting emphasized the need for joint effort with particular emphasis on the need to articulate programs.

Following a pattern of proceeding from the general to the specific, the more than one hundred (100) persons met jointly for the Friday morning meeting. The sessions Friday morning captured three main points: a common understanding of articulation as it is being used in this context, the need for and the benefits from articulation, and several examples of how it is being developed in specific situations within the State. Presenters for this session were all drawn from the ranks of vocational education and technical education personnel in South Carolina.

Much of the purpose of the conference was realized during the Friday afternoon session. The conference attendees were assigned to one of approximately a dozen discussion groups, each with a designated chairman, to concentrate on two major topics: program ar-

ticulation and common concerns. The assignments to the discussion groups were predicated on geographic location. The vocational directors were clustered with the persons from the technical education centers where their (vocational education) graduates might attend a technical education college/center. All participants had copies of previously designed worksheets or forms that would help the groups to reach the conference objectives. If all of the applicable blanks on the forms were filled in, this information would, in essence, assure that several of the conference objectives were reached.

The morning of the last day of the three day conference was designed to stimulate more ideas, promote a spirit of cooperation, and help the smaller discussion groups commit themselves to further action. Brief reports were given by a spokesman from each of the small discussion groups from the previous day. Another speaker representing a position of national prominence, Dr. Gene Bottoms was scheduled and did address the participants. The concluding major items were a reaction to the Conference by a current member and former Chairman of the State Advisory Council, Mrs. Helen Stuart, and an overview and summarization by Dr. James Morris. Each of these exceptionally well-done presentations again contributed to the objectives of the conference.

Summaries of selected presentations are included because of the bearing they had on the results of this conference.



Dr. Dan Dunham



I'm delighted and honored to be given this opportunity to speak with you tonight. The State Advisory Council on Vocational and Techni-

cal Education has provided the glue to bring you together at this meeting; I commend the Council for their leadership.

I'd like to title my remarks tonight "Meshing and Bridging." This is the purpose for you meeting here together — to discuss the meshing and bridging of secondary and post-secondary occupational education.

I come here with some real hope. With that hope comes some expectation of goals. To reach these goals you will have to be opportunistic and innovative. You will have to be advocates for progress and change. It will be necessary to project an attitude of support and service. I'm confident that you will work together, criticize and then move forward. Through it all, you will need to be practical and forward-looking.

I'd like to briefly discuss with you eight issues in education. We can call them *issues*, *priorities* or *initiatives*.

The first priority is to develop a positive connection between your vocational programs and the CETA programs. Vocational education, secondary and post-secondary, should be a primary delivery system for CETA programs. The issue is interwoven with critical state and national initiatives for reducing youth unemployment, for job placement, and most importantly for job development. Vocational education should be the dependent variable. Facilities, teachers and programs in vocational education should be made available to eligible CETA clients. Vocational education is the best system for preparing and retraining people for

work. We must prove that fact by our active roles in this important system of manpower development and training.

The second priority is to adequately serve youth in urban centers and in isolated rural areas. The unemployment rate for Black males, ages 16-26 is now 47.8 percent. These statistics ought to shock us — they are unconscionable — they signal failure in our education system. We ought to be building on the fact that the unemployment rate for youth who have completed vocational education is generally one-half that for those who do not. It must be apparent that we are not now serving the numbers we ought to be with the kind of vocational education programs which will lead to employment.

Program availability is a third priority of local, state and national significance. Currently, on a nation-wide basis, less than 60 percent of those who can profit from vocational education are enrolled in such a program. Options available to adults must be expanded to include credit towards graduation for work experience, and opportunity to reenter the school house as often as necessary. We need to focus on serving incarcerated persons. Less than ten percent (10%) of incarcerated persons receive any vocational education in this age of increasing continuing education. Our secondary programs also need to be strengthened, continued and maintained. It is important to insist on more bridge building between education and the work place. The first question employers ask is "what experience have you had?" At least fifty percent (50%) of the secondary program graduates and one hundred percent (100%) of the post-secondary graduates should have had at least six months of cooperative work experience upon graduation.

The fourth priority is to improve, expand and extend our planning, accountability and data systems. Despite the plethora of data systems, the data are not compatible. Planning, decision-making and evaluation are interde-

pendent functions — this is a cycle for managing resources which depends on reliable, understandable data.

The fifth priority is in the area of guidance. Over the past 15 years, guidance for vocations has suffered from the lack of the substantial effort it deserves. Young people and adults must have accurate, up-to-date career and occupational information. Individual students' interests, aptitudes and abilities need to be assessed and career choices made from a base of real work-world knowledge.

Vocational equity is priority number six. This means equal access to vocational education for both men and women. There should be equity in access regardless of age, race, sex, national origin, handicap, or any other basis. For those in vocational education, knowledge of section 504 of the Vocational Rehabilitation Act, Title IX, Public Law 94-482, and the Civil Rights Act is essential and a prerequisite for action.

There is perhaps no more pervasive issue among those already cited than that of meeting the special needs of those students who, without unusual and special assistance, cannot succeed in a regular program of vocational education. Having recently held a position with a state, I am aware of and dissatisfied with current regulations and funding; we will continue to work for improvement in these areas. Public Law 94-142 expands the continuum of eligibility to age 21; vocational educators must do their best to meet the needs of this ever-expanding population. Concurrently a better job must be done of identifying those who are disadvantaged by improving and expanding the system of data gathering, identifying and certification.

Eighth on my list of initiatives is a continuing emphasis on basic education. This implies an emphasis on the student in a variety of roles — as a consumer, as a learner, in a family role. Remedial education goes on everywhere and in vocational education we have a broader responsibility than just for skill training. We must be flexible to reorganize, to refer students, and

to provide necessary supportive services. We have suffered far too long from the separatist concept of the "academic" versus "vocational" delivery systems within our public school settings. Vocational educators have responsibility for more than "referral" of those who lack basic education and life skills.

This is my list of eight initiatives.

The practice of turning knowledge into application is found in the uniqueness of vocational education. There is good hope for articulation between secondary and post-secondary vocational education, and for articulation between vocational education and the work place. Much of this hope comes from the people in this room tonight.

If we are to solve problems, we must meet the challenges of these initiatives and build bridges. A chasm exists between secondary and post-secondary education. One exists between education and work. A third chasm exists between local, state, and federal agencies in this field. I see great promise in this room; you can build the bridges over these chasms.

If we are to build bridges, we must know the distance between the precipices and the geology of each shore. We must design bridges that will mesh together and will stand over time. These bridges will require the development of good interpersonal relationships, and will require vision, judgment and flexibility.

My list of bridge building materials include six "C's" and one "A." These are: contact, communication, coordination, cooperation, collaboration, and an optional ingredient of consolidation. The "A" ingredient is the all important: "Articulation."

Our bridges must be solidly built, and must be built together. This will require agreement on purpose for the bridges; trust; respect; willingness to take risks; and a willingness to experiment. We must start with top level administration. The middle span I will call implementation; the last span is evaluation. To-

gether these spans will build a solid bridge.

One common shortcoming in vocational education is that when we do build a bridge, we fail to announce its opening. We must tell the public, the students, the legislature and the Congress of each newly built bridge. If you get into substantive goals at this conference, then tell your story. Do what you say you are going to do, and later, when completed, announce your accomplishments.

Thank you.

Mr. Bill Pittman



Mr. Bill Pittman, Machine Shop instructor at McDuffie High School, addressed the topic of articulation generally in addition to dis-

cussing properly developed curriculum efficacy in machine shop. Mr. Pittman challenged the conference participants to place behind them any past disagreements and instead to work cooperatively for the development of course curriculums that will successfully and efficiently move students from point A to point B in a skills progression program.

The fact that articulation has to happen on an instructor to instructor basis was stressed by Mr. Pittman. He cited his professional relationship with the Machine Shop instructor at Tri-County TEC as a model example. The two of them have worked closely together through the years to develop coordinated curriculums that have expedited their students learning proficiencies. Mr. Pittman's students have received advanced placement in Tri-County TEC's machine shop program according to their skills mastered as determined and checked off by Mr. Pittman. Mr. Pittman acknowledged that his professional reputation

was on the line every time a student matriculated at Tri-County with advanced standing, and for this reason his students were not given credit by him for any more than they deserved.

The conference participants, particularly the vocational center/school directors in the audience, were urged to support and encourage a student who has chosen to attend a TEC school. Also, the vocational education teachers should be instructed to encourage this student decision when it occurs.

Recurrent competency testing was perceived by Mr. Pittman to be essential in any course curriculum outline developed by vocational center/school or technical college/center instructors. The audience was informed that another requirement for instructors at all levels is the maintenance of accurate records of each student's progress.

In closing, Mr. Pittman implored the conference institutional leaders upon their return home to bring together the instructors in vocational and technical education schools. Only by the instructors meeting and chatting on a one-to-one basis will they be able to determine what one another is doing. Mr. Pittman further stated that in order for articulation to become successful on a state-wide basis in South Carolina, all common programs must follow the same curriculum guides and require performance competencies. Submission to testing on the state level is a future development foreseen by Mr. Pittman.

Dr. Kent Sharples



Dr. Sharples defined curriculum articulation as the process of defining specific learning objectives required for a person to function at

a prescribed level of competency. It is also the subsequent transition of students between

agencies (vocational school to vocational school or vocational school to TEC) without repetition, loss of time or additional cost.

According to Sharples, several conditions have contributed to an absence of articulation. These conditions include:

1. The complexity of vocational education through several levels and several agencies providing the delivery of basic vocational education.
2. There has been no central coordinating agency to require articulation.
3. The widening selection of programs compounds the problem.
4. Teachers typically have not tended to communicate between themselves, especially between agencies.
5. Most articulation efforts have been local and consequently there has been little state-wide articulation.
6. There has been a lack of time and expertise to develop competency based materials so necessary to articulation.

Several major points were discussed, which are summarized here for the sake of brevity.

1. Articulation cannot take place without the implementation of competency based instruction.
2. There is no simple definition of competency based instruction. This is a concept, not a delivery system, but one that requires each student to master curriculum materials at a level of proficiency which is established by the teacher.
3. The delivery system is dependent on several variables. These include the curriculum, the strengths and weaknesses of the instructor, and the facilities used for instruction.
4. The need for cooperative course development is significant in that approximately forty percent (40%) of vocational

education involves instruction beyond the high school level.

5. Curriculum articulation should be a blend of all the elements involved in vocational and technical education.
6. Task level articulation is the best way to solve the problem and it will lead toward competency based instruction.
The instructors are the key persons in developing this type of instruction and in the initial efforts advisory committees can be helpful in identifying job entry skills.
7. Each curriculum should include individually guided performance oriented modules that can be modified as changes occur in technology and in the occupation(s).
8. Using this mode of instruction, the teacher must function as a manager to insure that each student masters each competency.
9. Allowance must be made for the different rates of learning by the students.

Tri-County Technical College and the adjacent area vocational centers have worked diligently to develop an articulation project using the curriculum in Air Conditioning and Refrigeration. This model allows proper placement of vocational center graduates who desire to continue post-secondary training in that area by use of objective tests based on specific behavioral objectives.

This project identified several problems that must be resolved. These problems are:

1. It is time consuming to develop modules.
2. It is expensive to develop modules.
3. The admissions office of the receiving institution must be set up to handle an open-entry and open-exit concept.
4. An equitable method for charging fees must be developed.
5. The materials must be continuously updated as the technology changes.

There are definitely some advantages to the effective articulation of curriculum. These advantages can be grouped as being advantages to the institution or faculty, or as advantages to the students.

1. *Advantages to the Institutions* — The materials that are available to the few once they have been developed become available to many and the reduction in cost is significant. Articulation encourages good education and supports good teaching.

2. *Advantages to the Students* — Career and educational alternatives are increased and training time and costs are decreased. Students may gain better mastery of the competencies during their training. Students are also encouraged to continue education as they progress up the career ladder.

A four phase model for instructional design which was developed during the air conditioning project was presented to the conference participants.

Trident Technical College Area

Mr. Hutchison began the articulation presentation with an historic overview of the genesis of the program in the three-county area. A college committee was formed in September of 1976, and its first official action was the employment as a consultant to the committee of Dr. Malcolm Hursey, who is a well known and trusted leader in education and who proved to be an effective catalyst in moving forward with the plan. By February, 1977, committee membership had expanded to include representatives from the public secondary school systems of Berkeley, Dorchester, and Charleston Counties, with the superintendents along with the Trident Technical College President serving as the executive committee. The committee selected three target areas for program articulation: Machine Tool, Office Occupations, and Automotive.

On September 8, 1977, a resolution was issued by the executive committee to serve as the charter for IMPACT — The Instructional Management Program for Articulated Competence Training — and on September 22, 1977, a full-day articulation workshop, featuring presentations from several persons including Mr. L. L. Lewis, Dr. Cecil Walters, Dr. Emily Owens, and Dr. Leon Lessinger, served as the organization meeting for the program committees in the three subject areas.

Mr. Seitz continued with an explanation of the process by which specific curriculum materials were developed by the program committees over the course of the 1977-1978 school year. For purposes of common communication, instructional planning and evaluation and validated entry-level vocational skills, competence-based instruction (CBI) was selected as the instructional management system for articulation. CBI with its system of performance objectives, criterion-referenced evaluation, and individualized instruction, already supported by the activities of an Advanced Institutional Development (AIDP) grant within the college, was augmented by use of V-TECs manuals, which had been in use by the secondary schools. V-TECs competencies were identified in the three program areas, edited and modified, and sequenced to fit the teaching requirements of the instructors. Additional competencies were developed in the V-TECs format, especially in the areas of typing and machine tool safety. Competency checksheets were formulated with copies for both student and instructor use.

By summer, 1978, instructional manuals had been completed for Machine Tool, corresponding to two years of secondary instruction, and four courses totaling twelve (12) hours at Trident Technical College; Typing, corresponding to two years of secondary instruction, and three courses totaling nine (9) hours at Trident Technical College; and one unit of the Automotive program (Brakes).

Mrs. Fisher and Mrs. Mishoe, who served as co-chairpersons of the office occupations program committee, commented on the practical application of the developed materials in their classrooms. Students are made aware in advance at the beginning of a course of study exactly what will be expected of them if they are to receive course credit. Teaching and learning objectives are specific with outcome learning levels outlined in detail on a check-sheet. Since course entry and exit levels are more precise, there is a greater uniformity of students within a classroom with students typing 15 words per minutes no longer in direct competition with students typing 60 words per minute; although, the materials used do allow for individualized study where variations do exist.

The secondary teachers are pleased that their students will be receiving college credit for skills they have mastered already. TEC instructors are equally pleased that entering students will be more precisely placed in classes on proper skills levels.

Mr. Duffy Stone, from the point of view of a secondary vocational center director, stated that mutual trust was at the center of what IMPACT had accomplished. Over the many months of meetings, of agreements and disagreements, the instructors and the directors and deans came to know and respect what their counterparts were doing. From this has grown a determination to produce a quality product and to achieve these goals in a cooperative manner.

Mr. McDaniel, by way of summary, offered advice based on IMPACT's status thus far. He emphasized the necessity of cooperative effort, of mutual trust and respect. Commitment — in writing — is an important aspect of the process that cannot be ignored. Resources, especially necessary funding and instructor released-time, must be identified in advance. It is better to begin on a limited scope, one within your resources. If necessary, your first

effort should be limited to one program and only a few schools. The governance structure is most important because decisions will have to be made and implemented. Someone, with authority, must approve plans, spending of funds, meetings, etc.

IMPACT, within the tri-county area, is an on-going process. 1978-1979 is the field trial year when materials will be used in the classrooms by more than 2000 students. Based on these experiences, teaching manuals will be revised as necessary. Beginning in June 1979, graduated secondary students will receive advanced standing credit at Trident Technical College based on their competence checksheets. Their progress and achievement will be monitored throughout the year.

By means of newly formed Program Committees, Office Occupations will be expanded to include shorthand and office procedures and new IMPACT programs will be added in Autobody, and in Drafting and Welding, among others.

In the future, articulation will expand its base to articulate two-year associate degree students with the four year colleges and universities.

Dr. Gene Bottoms



I would like to share a few thoughts with you this morning. First, I want to look at why this topic of articulation, what is the

professional basis for it? Second, I want to address a few points on the national level that will make this a continuous dialogue. Third, I want to share a few ideas on what is the basis for federal investment in vocational education for work. I would then like to conclude with several goals that we ought to think about at the national level.

Articulation, what is it? Articulation means to link or connect. From a professional viewpoint, there are several reasons why articulation is important. Number One, America's great strength in education is that options are kept open for youth. Articulation strengthens those options which are open.

Secondly, learning is continuous. Career decision-making is continuous. An individual may think he wants to be a machine tool operator when he begins his education but later decides upon an advanced level. This is part of life. I do believe in a five-year career goal cycle.

Third, we also have espoused in this profession that we start you where you are. We do not retract you to where you have been.

Fourth, it is important in days of Proposition 13 that we develop for the public a coordinated vocational education program.

In looking at the second topic I wish to address, the reasons articulation will continue to be a national concern are several in number. Federal support will remain diffused for some period of time. It will be streamed through several pieces of legislation because there is great confidence in this aspect of education's ability to solve many of the nation's problems.

Secondly, federal emphasis on coordinated planning for vocational education will continue to mount. You may recall the organization of the 1202 Commissions and the CETA Manpower Council from previous pieces of legislation. This present bill to be approved has several more leverage points of coordinated planning with education. We have worked hard to provide these leverage points — particularly to help you work more closely with CETA.

There has been a shift in federal spending in education away from institutions to individuals. We still lack the ability in many communities in America to provide quality education programs. We in education must communicate to the federal government why it is in the nation's best interest to maintain strong

vocational education centers, and to provide up-to-date equipment in these centers. We have not been carrying this story very clearly.

Fourth, social changes in this nation will place an increasing emphasis on more, not less, education for work.

Number Five, the citizens' concern for rising taxes will cause citizens all over the nation to ask why build more facilities when facilities already available are lying vacant eight hours a day. A continuing need for broadening the spectrum of articulation does exist.

Number Six, there is a shortage of jobs in some communities. You in South Carolina with your vocational and technical centers have set a pattern for the rest of the nation by working with new and expanding industries. This is now being picked up by other states. The next great launch forward is going to be some form of youth enterprise and sheltered employment for persons who cannot move into private enterprise before they have some form of experience. There will be a series of institutional services developed to help small businesses. I think it will grow out of the type institutions you represent. As Marv Feldman said in the September issue of the *American Vocational Journal*, "There is no shortage of work in America; there is a shortage of jobs."

The third topic I would like to address is what is the basis for the federal investment in vocational education for work. For starters, there is presently a declining student population in America. There will be three million fewer students in American high schools in 1985 than are present today. Sixteen percent (16%) of those in high schools now come from the poor. In 1985, this figure will be thirty percent (30%).

As the declining enrollment crunch on secondary students comes, we are going to find a great adult population out there to serve that we had not seen before. We set as a goal in Georgia ten years ago that we ought to be serving ten percent (10%) of the adults every year in vocational and technical centers. When an

adult has to drive over ten (10) miles at night to attend a vocational class, participation declines very quickly. You, in this state, must learn how to keep your schools open 16 and 18 hours a day for a massive adult education program that is going to lift your state economically.

Now, what would be my suggestions to you in addition to implementing those goals I have heard you state this morning? First, aggressively reach out. The local administrators, be they secondary or post-secondary based, can no longer just look vertically to the State for your resources. The Federal government is providing a whole host of resources at the local level, and you're going to have to learn to work horizontally to tap some of those resources.

Secondly, I would encourage you to develop your local AVA Chapters. I would suggest having local vocational chapters in all areas of the state whereby your vocational teachers could come together about three or four times a year to focus on some common professional concerns. These meetings could utilize speakers to address professional issues which are of concern to all and could promote further this commonality which has been developing here at the conference.

I do encourage you to move on with those local volunteer councils you have talked about. I would even encourage you to expand those into volunteer local vocational education and work councils for regions. For you can sit down together with industry representatives and determine how the total array of resources available in your area might best meet the needs of existing industry. The South is doing much to provide in-plant service training, but we need to continue to "beef up" those efforts.

Keep the individual student as the focal point in the way that you work and you will not make many mistakes.

Again, I appreciate this opportunity to visit with you. If there are issues you think this association ought to be addressing that we are not, please write down these ideas and communicate with us. We are going to stake our case on the following concept. We will make our first priority trying to communicate the potential of this aspect of education to serve the people of this nation. I do not think we will make many mistakes when we place the people first.

Thank you.

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the results

The conference was designed to focus on two topics that, while related, are distinctly separate. These are: (1) the articulation of selected secondary level vocational education programs with related or similar programs at the technical institution level, and (2) mutual concerns on problems faced by vocational directors and technical education institution administrators. These will be discussed under the shortened terms of (1) articulation, and (2) concerns.



Each of the discussion groups were organized to include the persons from a technical education institution and all of the vocational directors within the normal commuting area of the technical college/center. In all, there were about a dozen discussion groups representing the major population areas. Since some technical center areas include as few as one or two vocational centers, and also because of a few absences, the number of discussion groups at the conference was slightly less than the number of technical education institutions in the State.

The spirit of the discussion groups resembled a concurrent series of "think tank," or "brainstorming" sessions. Limited by time, they were directed only to divide their available time to the two topics, and to attempt to provide information pertinent to the two forms to be completed. The overall climate or group attitude was one of complete cooperation to the extent possible. The directors, presidents, and the few state staff personnel reported an excellent spirit of cooperation.

Articulation

The individual discussion groups represented geographic areas that had reached varying degrees of progress in achieving articulation. Each discussion group was different in several ways: the number of courses in common between the technical education institution and one or more vocational education centers; the level of progress that had already been reached; and the commitment and/or resources to work on this matter.

Seventeen different types of programs were identified as being in common with one or more vocational centers and a technical education institution. There were as few as four (4) programs in common for one discussion group (tec center area) and as many as fifteen (15) on the largest list. The average number of common programs was just over seven (7.1). The types of programs most frequently listed by the groups were: auto mechanics, office occupations, welding, machine shop, electricity, air conditioning and heating, and drafting.

Most of the groups selected a few programs to work on first for articulation, usually from two (2) to four (4) programs. They typically established a time-frame and designated the person or persons responsible for additional progress.

The abbreviated list of items that follow represent decisions reached by one or more of the discussion groups. It is not presented in priority order, and neither does it list all of the decisions reached or action taken by the participants. This list is offered with the expectation that it will describe to the reader the diversity of possible action, and the efforts being made.

- Identify skills and competencies common to programs in both the technical college and in the secondary vocational center, and give credit and advanced placement on the basis of tests.
- The technical college will send each vocational center a list of students with infor-

mation on advanced placement and the level of advanced placement.

- Two specific courses identified for the purpose of developing articulation based on V-TECS curriculum.
- Agreed to hold joint meetings throughout the year of the technical college presidents and the vocational directors for that area.
- Agreed to develop a joint agreement on articulation among the vocational centers and the technical college.
- There should be joint or cross membership of members of local advisory committees for related programs. Instructors should be members of the advisory committees for their counterpart educational program.
- Hold once-a-year joint meeting for all instructors of programs amenable to articulation.



- Have a joint effort in curriculum planning.
- Develop a statement of purpose and a commitment to articulation of vocational/technical education programs.
- Continue the already on-going efforts for articulation in certain program areas.
- Develop a formal articulation agreement among the vocational directors, supervisors and the technical college presidents.
- Continue field trips to the technical college by classes of vocational programs.
- Continue the interface of technical teachers and vocational teachers on local advisory committees.

Articulation — State Level

Several concerns emerged which relate to articulation that extend beyond the local level. These were:

- There should be a center or clearinghouse within the state to obtain and disseminate information on articulation. Much of the effort in articulation involves curriculum revision and development. There should be no need for each area to have to “re-invent the wheel” in each curriculum area.
- There should be formal expressions of agreement at the state level concerning articulation. Several local directors/presidents expressed a belief that the two State Boards (State Board of Education and State Board for Technical and Comprehensive Education) should state a policy of commitment to articulation.
- The policy on student placement and follow-up as expressed in the State Plan for Vocational Education appears to have the effect of discouraging articulation. This policy should be carefully studied to assure that students placed in related post-secondary occupational education programs would be considered as positive placement for the secondary programs.
- There should be another meeting next year similar to this meeting. This would permit each of the discussion groups to come back and report on progress made; to share materials and solutions to articulation; and would allow for more interaction between the technical education presidents/directors and the vocational directors.

Concerns

Each discussion group was encouraged to utilize some time to identify and discuss concerns that were mutual to both technical education and the vocational education institu-

tions. Some of the more salient points are listed below, but not in any particular order.

- Counselor awareness of the needs of vocational and technical education.
- Correctly placing students in the best program for them.
- More and better communication between vocational education and technical education.
- Better awareness for the secondary counselors of the programs within technical education.
- Common curriculum state-wide for identical or similar programs within vocational education and technical education.
- A need to communicate to the public the programs available in technical and vocational education.
- The entire area of guidance.
- Lack of V-TECS materials being available to administrators.
- The need to count vocational program completers who enter related technical

education programs in a positive way on the follow-up of vocational students.

- Closer vocational and technical education coordination in working with various publics, including legislative delegations.
- A need to report back next year to continue the spirit of cooperation.

Most of the discussion groups planned to have joint meetings at periodic intervals during the year in their home towns. A few established specific dates and times for the first meeting while at the conference.



appendices

Participants

Dr. Moody Oswald
Mr. Eric Wilson
Dr. Gil Woolard
Mr. DaCosta Muckenfuss
Mr. Salvatore Fede
Mr. Ashley Little
Mr. Kenneth O. Couch
Mr. J. P. Pickens
Dr. Lex Walters
Mr. Ed. Lau
Mr. Riley O. Carroll
Mr. Rudy Grooms
Mr. O. K. Cook
Dr. Baxter Hood
Mr. John Hunter
Mr. L. L. Lewis
Mr. Bill Pinson
Mr. H. D. Harris
Mr. Buddy Dempsey
Mr. Hugh Chastain
Dr. Emily Owens
Mr. Jesse Hines
Mr. J. D. Jackson
Dr. Ronald Hampton
Dr. Darrel Staat
Mr. W. B. Gregg
Mr. Gordan Rolston
Mr. Wallace Reid
Mr. Fred Fore
Mr. W. E. Kizer

Mr. Nick Milasnovich
Dr. John McKay
Dr. J. L. Hudgins
Dr. J. F. Wynn
Mr. E. A. Neumeister
Mr. Joseph Ashley
Mr. Don B. Still
Mr. J. W. Henry
Mr. Dean Ganis
Mr. Norman Woodward
Mr. Henry Thompson
Mr. Joseph Marshall
Mr. Bud Teaster
Ms. Helen G. Stuart
Mr. Greg Black
Mr. B. Frank Godfrey
Dr. Robert H. White
Mr. Ordie P. Taylor, Jr.
Dr. Arthur Jensen
Mr. E. G. Hutchison
Dr. Charles Ward
Mr. O. D. Mixon
Mr. George Goldsmith
Mr. Joseph Hopkins
Mr. Guy Blackwell
Mr. Robert L. Grigsby, Jr.
Mr. John Smiley
Mr. J. P. Camp
Mr. Fred Seitz
Mr. Richard Cullins

Dr. William Rentz
Mr. W. F. Anderson
Dr. Thomas Barton, Jr.
Mr. Davis Shull
Mr. J. P. Corn
Mr. John Morrison
Mr. Don Bateman
Mr. Bill Jordan
Mr. James McDaniel
Mr. Eddie Jones
Mr. Jake Strickland
Mr. Bill Johnson
Mr. Bobby Anderson
Mr. Alvin Berry
Mr. Duffie Stone
Mr. George Cooper
Ms. Myra Reynolds
Mr. Robert West
Dr. Jim Morris
Dr. Cecil Walters
Mr. Stan Hudnall
Mr. Allen Powell
Dr. Doug Brister
Mr. Don Cameron
Mr. Joe Gault
Mr. Wilson Lovett
Mr. Earl S. Rochester
Mr. Bobby Randolph
Dr. John W. Manly
Dr. Don C. Garrison

PROGRAM EFFICACY

FORM A

GROUP _____

(A, etc)

Chairman _____

Name of Major Town, City _____

1. List of Institutions/Centers/Districts

Represented

Name of Person

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

2. List of occupational programs offered in the TEC institution AND one or more school districts/ vocational centers.

1. _____
2. _____
3. _____
4. _____

3. List and briefly describe any necessary or highly desirable agreement.

State briefly what should be done to achieve articulation for each of the programs listed in #2.

<i>Program Type</i>	<i>Goal</i>	<i>When to be Achieved (Deadline)?</i>	<i>Person Designated to Provide Leadership</i>	<i>How is Progress to be measured?</i>
1.	1.	1.	1.	1.
2.	2.	2.	2.	2.
3.	3.	3.	3.	3.
4.	4.	4.	4.	4.
5.	5.	5.	5.	5.

MUTUAL PROBLEMS

FORM B

1. Workshop _____
(A, etc.)
2. Name of Principal Town, City in Area _____
3. Names of persons present for this discussion

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
4. List the needs that appear to be common to secondary and post-secondary occupational education institutions in your area.

Go back and identify, the most important, the second and third most important needs. Restate these on next page.

Problem

Preferred Action

Who Responsible

Deadline Date

#1 Need

#2 Need

#3 Need

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